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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/594,866

09/29/2006

Dirk Schmidt

FMW-CT-PCT-US

8169

28862 7590 12/24/2008
HUDAK, SHUNK & FARINE, CO., L.P.A.
2020 FRONT STREET
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EXAMINER

CHAU, TERRY C

ART UNIT

PAPER NUMBER

4184

MAIL DATE

DELIVERY MODE

12/24/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/594,866	Applicant(s) SCHMIDT ET AL.	
	Examiner TERRY CHAU	Art Unit 4184	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/29/2006</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement filed 9/26/2006 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered.

Specification

3. The disclosure is objected to because of the following informalities:

A galvanic cell (line 1, page 6) is an electrochemical cell; hence, the robust construction (line 8, page 6) would necessarily include electrical components, contrary to lines 8-9, page 6.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

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art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 8 and 20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

An engine control mechanism as mentioned in paragraph 0019 and 0024 of the specification. Applicant is advised to clarify the operations of the engine control mechanism as it relates to the claimed invention.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 2, and 14-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hunger (DE 3,530,467 A1; see translation) in view of Wood (US 2,960,352).

Hunger teaches:

Re claim 1:

A closing mechanism (catch hook 4) arranged on the bottom side of a coupling plate (coupling plate 1), having at least one closing hook (catch hook 4) or closing bar or a

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combination thereof provided with a coating (anti-friction coating 7), wherein the coating (anti-friction coating 7) of the closing hook (catch hook 4) or closing bar or both is configured as a sliding coating (anti friction layer 7 would imply that the coating reduces the resistance between two sliding surfaces; also see the last paragraph of translation).

Hunger fails to specifically teach: (re claim 1) a system for lubricating a closing mechanism on fifth wheels comprising a grease reservoir, which is connected by a lubricating line to the closing hook, and the grease reservoir is a grease cartridge, with the grease cartridge arranged on the fifth wheel; (re claim 2) wherein the grease cartridge is coordinated with the fifth wheel.

Wood teaches a system for lubricating a closing mechanism (portion 20; see line 47-57 and 62 to 72, column 2; portion 20 can be removed and attached to portion 21) on fifth wheels (carrying member 10) comprising a grease reservoir (defined by pathway from port 17, 18, and 19 to the lubricant carrying material 13), which is connected by a lubricating line (formed by the pathways from groove 12 to ports 18, 19, 20) to the closing hook (portion 20) and the grease reservoir (defined by pathway from port 17, 18, and 19 to the lubricant carrying material 13) is a grease cartridge (the reservoir as defined from point 15 to saw cut 22 is modular, hence that portion of reservoir can be defined as a cartridge as it may be removed from the fifth wheel), with the grease cartridge (see previous definition) arranged on the fifth wheel (carrying member 10). Since the grease cartridge (see previous definition) works with the fifth wheel (carrying member 10) to lubricate the kingpin (16; see lines 28 to 33), the grease cartridge (see previous definition) is coordinated with the fifth wheel (carrying member 10).

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In view of Wood's teachings it would have been obvious to one of ordinary skill in the art at the time of the invention to include, with the closing mechanism as taught by Hunger, (re claim 1) a system for lubricating a closing mechanism on fifth wheels comprising a grease reservoir, which is connected by a lubricating line to the closing hook, and the grease reservoir is a grease cartridge, with the grease cartridge arranged on the fifth wheel; (re claim 2) wherein the grease cartridge is coordinated with the fifth wheel; since Wood teaches that a system for lubricating a closing mechanism on fifth wheels may be included with the closing mechanism so as to provide automatic constant adequate lubrication of the contact surfaces (lines 28-33, column 1).

Hunger teaches:

Re claim 14:

The system per claim 1, including the closing hook (catch hook 4) for use in a fifth wheel (coupling plate 1), wherein at least one outer surface is provided with a coating (anti friction layer 7), wherein the coating (anti friction layer 7) is in the form of a sliding coating (anti friction layer 7 would imply that the coating reduces the resistance between two sliding surfaces; also see the last paragraph of translation).

Re claim 15:

The system per claim 14, wherein the sliding coating (see above) consists of a multilayer system.

In the final paragraph of the translation, Hunger teaches, "all slidable cooperative surfaces are by a steel PFTE friction mating." Hence two layers, steel and PFTE, are

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present.

Re claim 16:

The system per claim 15, wherein the multilayer system (see above) is preferably composed of at least a first layer (steel), which comprises an iron alloy with nickel and molybdenum fractions (iron, nickel and molybdenum are elements common in steel), and a second layer of PTFE (see final paragraph of translation), applied to the first layer (steel).

Hunger fails to specifically teach: (re claim 17) wherein the sliding coating has a layer thickness of 50 to 150 μm , and (re claim 18) wherein the sliding coating has a layer thickness of 70 to 130 μm .

One of ordinary skill in the art at the time of the invention understands that the thickness of the sliding coating affects the friction and wear characteristics of the closing mechanism. Thus, the thickness of the sliding coating would be selected accordingly.

In view of Hunger's teachings it would have been obvious to one of ordinary skill in the art at the time of the invention to provide a sliding coating on the closing mechanism as taught by Hunger, (re claim 17) wherein the sliding coating has a layer thickness of 50 to 150 μm (re claim 18) wherein the sliding coating has a layer thickness of 70 to 130 μm ; in order to reduce the wear on the closing mechanism. Furthermore, applicants have not shown that the claimed dimensions are critical or that the claimed dimensions provide any unexpected results.

Hunger teaches:

Re claim 19. The system per claim 1, including the closing bar (catch hook 4) for use in a fifth wheel (coupling plate 1), wherein at least one outer surface is provided with a coating (anti friction layer 7), wherein the coating (anti friction layer 7) is in the form of a sliding coating (anti friction layer 7 would imply that the coating reduces the resistance between two sliding surfaces; also see the last paragraph of translation).

8. Claims 3-12, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hunger (DE 3,530,467 A1; see translation) in view of Wood (US 2,960,352) and Hartl (US 5,417,308).

The teachings of Hunger and Wood have been discussed above.

Hunger and Wood fail to specifically teach: (re claim 3) wherein the grease cartridge is arranged underneath the coupling plate; (re claim 4) wherein the grease cartridge has a drive unit; (re claim 5) wherein the drive unit comprises an electromechanical drive; (re claim 6) wherein the drive unit comprises a chemical drive; (re claim 7) wherein the drive unit is connected to a variable control mechanism; (re claim 8) wherein the variable control mechanism comprises an engine control mechanism; (re claim 9) wherein the variable control mechanism comprises a valve control mechanism; (re claim 10) wherein the valve control mechanism comprises a flow restriction valve arranged in the lubricating line; (re claim 11) wherein the variable control mechanism communicates

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with a vehicle control unit; (re claim 12) wherein the variable control mechanism communicates with a coupling control unit.

Hartl teaches a trailer fifth wheel lubrication apparatus wherein a grease cartridge (lubricant supply assembly 24) is arranged underneath (see figure 1) a coupling plate (fifth wheel assembly 12). The grease cartridge (24) has a drive unit (air pressure control valve assembly 44; see line 55, column 7 to line 11, column 8). The drive unit (44) comprises an electromechanical drive (truck battery 50 is used to electrically power the electrically operated valve operator 48). The drive unit (44) comprises a chemical drive (battery 50 operates through a chemical reaction). The drive unit (44) is connected to a variable control mechanism (see figure 4; also see line 55, column 7 to line 11, column 8). The variable control mechanism (see above) comprises an engine control mechanism. (An engine is a machine that converts energy into mechanical force or motion. In this case, the pneumatic system shown in figure 4 is an engine, and control assembly 34 is an engine control mechanism.) The variable control mechanism (see above) comprises a valve control mechanism (two valve control mechanisms are present; electric valve operator 48 controls valve assembly 46, and lubricant supply line 22 is controlled by check valve 54). The valve control mechanism (check valve 54) comprises a flow restriction valve (check valve 54) arranged in the lubricating line (lubricant supply line 22). The variable control mechanism (see above) communicates with a vehicle control unit (control assembly 34 in figure 4 is a vehicle control unit which communicates with the variable control mechanism). The variable control mechanism (see above) communicates with a coupling control unit (applicant defines coupling

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control mechanisms in paragraph 0023 of the specification as a device which enable an automated coupling and uncoupling of the trailer; fifth wheel assembly 12 enables a coupling and uncoupling of the trailer; the variable control mechanism communicates with fifth wheel assembly 12).

In view of Hartl's teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to include with the system for lubricating a closing mechanism on fifth wheels as taught by Hunger and Wood, the limitations of claims 3 to 12; since Hartl teaches that a fifth wheel lubrication apparatus with the aforementioned designs may be easily and efficiently manufactured and marketed, is of durable and reliable construction, does not require manual administration of grease to the fifth wheel, adequately lubricates a fifth wheel, and can be controlled from inside the truck (see lines 58 column 4 to line 59 of column 5).

The teachings of Hunger and Wood have been discussed above.

Hunger and Wood fails to specifically teach: (re claim 20) wherein the grease cartridge is arranged underneath the coupling plate and has a drive unit that comprises an electromechanical drive or a chemical drive, wherein the drive unit is connected to a variable control mechanism that comprises a valve control mechanism, or a flow restriction valve arranged in the lubricating line, wherein the variable control mechanism communicates with a control unit arranged on the coupling plate.

Hartl teaches a trailer fifth wheel lubrication apparatus wherein the grease cartridge (lubricant supply assembly 24) is arranged underneath the coupling plate (fifth

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wheel assembly 12) and has a drive unit (air pressure control valve assembly 44; see line 55, column 7 to line 11, column 8) that comprises an electromechanical drive (truck battery 50 is used to electrically power the electrically operated valve operator 48) or a chemical drive (battery 50 operates through a chemical reaction), wherein the drive unit (air pressure control valve assembly 44; see line 55, column 7 to line 11, column 8) is connected to a variable control mechanism (see figure 4; also see line 55, column 7 to line 11, column 8) that comprises a valve control mechanism (two valve control mechanisms are present; electric valve operator 48 controls valve assembly 46, and lubricant supply line 22 is controlled by check valve 54), or a flow restriction valve (check valve 54) arranged in the lubricating line (lubricant supply line 22), wherein the variable control mechanism (see above) communicates with a control unit (numerous control units are present; check valve 54 is one such control unit) arranged on the coupling plate (fifth wheel assembly 12).

In view of Hartl's teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to include with the system for lubricating a closing mechanism on fifth wheels as taught by Hunger and Wood, the limitations of claim 20; since Hartl teaches that a fifth wheel lubrication apparatus with the aforementioned designs may be easily and efficiently manufactured and marketed, is of durable and reliable construction, does not require manual administration of grease to the fifth wheel, adequately lubricates a fifth wheel, and can be controlled from inside the truck (see lines 58 column 4 to line 59 of column 5).

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9. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hunger (DE 3,530,467 A1; see translation) in view of Wood (US 2,960,352), Hartl (US 5,417,308) and Schedratl et al. (US 5,438,881 A).

The teachings of Hunger, Wood, and Hartl have been discussed above.

Hunger, Wood, and Hartl fails to specifically teach: (re claim 13) wherein the variable control mechanism communicates with a pressure sensor arranged on the coupling plate.

Schedratl et al. teaches the placement of force or displacement sensors 8, 14, and 15 (see lines 40-45, column 3) around fifth wheel support plate 11a and fifth wheel kingpin 4. Please refer to figures 1, 3a, and 3b. In lines 38-47, column 2, Schedratl et al. teaches that the measuring device 8 can be used to obtain pressure measurements.

In view of Schedratl et al.'s teachings it would have been obvious to one of ordinary skill in the art at the time of the invention to include with the fifth wheel lubrication systems as taught by Hunger, Wood, and Hartl, (reclaim 13) wherein the variable control mechanism communicates with a pressure sensor arranged on the coupling plate; since Schedratl discloses the placement of force sensors around the fifth wheel support plate can be used to measure wear and improve the driving behavior of the vehicle under different loads (lines 6-27, column 1).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Jones, Jr. (US 3,743,054) teaches a hand-operated fifth wheel lubrication system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TERRY CHAU whose telephone number is (571)270-5926. The examiner can normally be reached on Monday-Thursday 8:30am-6:00pm; Alternate Friday 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jared Fureman can be reached on 571-272-2391. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/TERRY CHAU/
Examiner, Art Unit 4184

/Jared J. Fureman/
Supervisory Patent Examiner, Art
Unit 4184

12/5/2008